

M-5



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,660	09/03/2004	Quanzhong Gao	9896-000051/NP	4776
27572	7590	08/10/2006		
HARNESSE, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER MARSH, OLIVIA MARIE	
			ART UNIT	PAPER NUMBER
			2617	
DATE MAILED: 08/10/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/506,660

Applicant(s)

GAO ET AL.

Examiner

Olivia Marsh

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Response to Arguments

2. Applicant's arguments filed May 29th, 2006 have been fully considered but they are not persuasive.

Regarding claim 1, In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "a connection between the SRNC and the target Node B will be established by the SRNC, and the connection is a **direct connection** [emphasis added] between the SRNC and the target Node B without passing the DRNC controlling the target Node B") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant's representative correctly observes that Sommer discloses "the SRNC can directly control a part of resources of the target cell, the SRNC can directly allocate some resources of the target cell to the MS, without signaling negotiation with the DRNC," (page 7, paragraph 2), thus, meeting the claimed limitation "initiating soft handover within RNC." Therefore, the Examiner will maintain the rejection of claim 1 in view of Sommer.

Art Unit: 2617

Regarding claim 6, Applicant's representative states "Sommer does not disclose that when a soft handover takes place, the SRNC needs to apply for resources to a specific functional entity, which is located in a network server," (page 9, paragraph 3). The Examiner respectfully disagrees. Sommer also discloses:

"The number of reserved channels, that is to say the transmission capacity which has been reserved for management by adjacent base station controllers RNC, can be variable in the individual radio cells and can be set as required. This is done by means of a signaling interchange between the base station controllers RNC," (page 10, lines 37-40; page 11, lines 1-3), reading on claimed "applying for required common resources to a specific functional entity that controls said common resources."

Sommer also discloses, as stated in the previous Office Action:

"If a subscriber station MS1 or MS_m moves, during the connection, into the monitored area of another RNC in which channels are reserved for it, which is referred to as a drift RNC (DRNC)," reading on claimed "network server," then the SRNC can allocate channels from the reserved area," (page 13, lines 39-40; page 14, lines 1-4).

Therefore, in light of the above, the Examiner will maintain the rejection of claim 6 in view of Sommer.

3. Applicant's arguments, see page 9, paragraph 2, filed May 29th, 2006, with respect to the rejection(s) of claim(s) 5 under 102(b) have been fully considered and are persuasive.

Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Chuah (U.S. 2003/0076803 A1). Please review below rejection for full explanation.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sommer et al (WO 00/54531).**

As to **claim 1**, Sommer discloses:

A method of optimizing soft handover between RNCS (Radio Network Controllers) (*page 4, lines 14-20, 27-34*), comprises steps of:

a. according to the measurement control information provided by a corresponding SRNC of a Node B to which a UE currently belongs, measuring signals of co-frequency neighbor cells by the UE to obtain a measuring result; reporting the measuring result to said SRNC by the UE; (*page 11, lines 31-37*)

b. making a handover decision according to said measuring result by said SRNC, and determining whether to make a soft handover; if not, then continuing to make handover decision; if yes, then determining whether said SRNC has right to dispatch common resources of a target Node B to which said the current UE is to handover; (*page 5, lines 26-38; page 8, lines 26-30; page 12, lines 24-28*)

c. if yes, applying for required common resources to a specific functional entity that controls said common resources of said target Node B by said SRNC, and then

Art Unit: 2617

going to step d; if not, then initiating a soft handover between RNCS, and ending (*page 11, lines 10-17*)

d. according to status of current use of common resources of said target Node B, responding whether said common resources are available by said specific functional entity, if yes, then establishing a connection between said SRNC and said target Node B by said SRNC, and initiating a soft handover within RNC, otherwise, initiating a soft handover between RNCS. (*page 11, lines 24-29; page 14, lines 1-6; Figure 7*)

As to **claim 6**, Sommer discloses everything as applied in claim 1 and Sommer also discloses the specific functional entity is a logical functional entity in a network server (*see page 14, lines 1-6; page 10, lines 37-40; page 11, lines 1-3*).

As to **claim 7**, Sommer discloses everything as applied in claim 1 and Sommer also discloses status of current use of common resources of said target Node B in step d is obtained according to whether there are idle common resources in target Node B (*see page 10, lines 39-34*).

As to **claim 8**, Sommer discloses everything as applied in claim 1 and Sommer also discloses initiating a soft handover between RNCS further comprises: setting the currently corresponding RNC of said target Node B as a DRNC, establishing a link between said SRNC and said DRNC, and making a soft handover between said SRNC and said DRNC (*see page 14, lines 1-6*).

As to **claim 9**, Sommer discloses everything as applied in claim 1 and Sommer also discloses retrieving the corresponding common resources by said target Node B, when a soft handover has been completed, and said connection between SRNC and target Node B needs to be disconnected (*see page 8, lines 26-30*).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sommer as applied to claim 1 above, and further in view of well known prior art (MPEP 2144.03).**

As to **claim 2**, Sommer teaches everything as applied in claim 1; however, Sommer does not specifically teach the measuring result in step b is a signal strength measuring result. The Examiner contends this feature was old and well known in the art at the time of invention as taught by well known prior art.

The Examiner takes Official Notice that it was old and well known to one of ordinary skill in the art at the time of invention to determine an interference probability based on the signal strength of the channel being tested.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the method, disclosed by Sommer, the measuring result in step b is a signal strength measuring result, as taught by well known prior art, to determine interference based on the proximity of the mobile device to its neighbor cells.

As to **claim 3**, Sommer teaches everything as applied in claim 1; however, Sommer does not specifically teach the measuring result in step b is a bit error rate measuring result. The Examiner contends this feature was old and well known in the art at the time of invention as taught by well known prior art.

The Examiner takes Official Notice that it was old and well known to one of ordinary skill in the art at the time of invention to determine an interference probability based on bit error rate of the channel being tested.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the method, disclosed by Sommer, the measuring result in step b is a bit error rate measuring result, as taught by well known prior art, to determine interference based on how well the mobile user is receiving data from the neighboring channels.

As to **claim 4**, Sommer teaches everything as applied in claim 1; however, Sommer does not specifically teach the measuring result in step b is a signal-interference ratio measuring result. The Examiner contends this feature was old and well known in the art at the time of invention as taught by well known prior art.

The Examiner takes Official Notice that it was old and well known to one of ordinary skill in the art at the time of invention to determine an interference probability based on signal-interference ratio of the neighboring channels.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the method, disclosed by Sommer, the measuring result in step b is a signal-interference ratio measuring result, as taught by well known prior art, to enable the SRNC to determine which neighboring channel would be best suited for the mobile device based on interference levels.

Art Unit: 2617

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sommer as applied to claim 1 above, and further in view of Chuah (U.S. 2003/0076803 A1).

As to **claim 5**, Sommer discloses everything as applied in claim 1 above; however, Sommer fails to disclose the specific functional entity is a logical functional entity within said target Node B. The Examiner contends this feature was old and well known in the art at the time of invention as taught by Chuah.

In an analogous art, Chuah teaches the specific functional entity is a logical functional entity within said target Node B (paragraphs 19, 22, and 28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the method and specific functional entity, disclosed by Sommer, the specific functional entity is a logical functional entity within said target Node B, as taught by Chuah, to avoid extra delay during a soft handoff process that may lead to a dropped connection of the call.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. EP 0898438 A3 (Figure 7) and WO 01/72057 A3 (Figure 7).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olivia Marsh whose telephone number is 571-272-7912. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on 571-272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


CHARLES APPIAH
PRIMARY EXAMINER